ATTENTION:
GENERAL MANAGER ❑
PARTS MANAGER ❑
CLAIMS PERSONNEL ❑
SERVICE MANAGER ❑

IMPORTANT - All Service Personnel Should Read and Initial in the boxes provided, right.

QUALITY DRIVEN® SERVICE

SUBARU

SERVICE PROGRAM BULLETIN

APPLICABILITY: 2005MY PZEV Spec. Subaru Legacy and Outback
SUBJECT: Engine Control Module (ECM) Reprogramming

NUMBER: WVI-19(R)
DATE: August 2009

This Campaign applies to vehicles in any state <u>except</u> those with motor vehicle registrations in the States of California, Massachusetts, Maine, New York or Vermont. For affected vehicles registered in these states, see Service Program WVH-18.

INTRODUCTION

Subaru of America, Inc. (SOA) has determined that vehicles affected by this Service Program require ECM reprogramming.

Under certain unique driving patterns, such as repeated acceleration and deceleration and/or continuous uphill driving at higher speeds (about 75 mph), the catalytic converters of affected vehicles may develop high internal temperatures that exceed design parameters. If left uncorrected, this condition may eventually degrade the catalytic converters. (The "CHECK ENGINE" light will illuminate to alert the driver if catalytic converter degradation has already occurred and that the vehicle may be releasing air pollutants which exceed Federal emission standards.). To prevent this condition, a modification to the Engine Control Module software logic has been developed that will improve management of temperatures within the catalytic converters.

This condition is a software issue and has no impact on vehicle drivability.

AFFECTED VEHICLES

2005 MY Subaru Legacy and Outback with CAL PZEV Spec Emission System and motor vehicle registration in any state **<u>except</u>** California, Massachusetts, Maine, New York or Vermont.

Affected vehicles are identified in the VIN range chart below. **NOTE:** Prior to performing repairs, confirm coverage for potentially affected vehicles by using the Vehicle Coverage Inquiry in the Dealer Communication System (DCS).

MODEL			FROM	TO
Legacy	2005MY	Sedan	5*200006	5*230146
		Wagon / Outback	5*300006	5*393924

* *Various characters may occupy this position of the VIN.*

Continued...

CAUTION: VEHICLE SERVICING PERFORMED BY UNTRAINED PERSONS COULD RESULT IN SERIOUS INJURY TO THOSE PERSONS OR TO OTHERS.
Subaru Service Bulletins are intended for use by professional technicians ONLY. They are written to inform those technicians of conditions that may occur in some vehicles, or to provide information that could assist in the proper servicing of the vehicle. Properly trained technicians have the equipment, tools, safety instructions, and know-how to do the job correctly and safely. If a condition is described, DO NOT assume that this Service Bulletin applies to your vehicle, or that your vehicle will have that condition.

SUBARU OF AMERICA, INC. IS "ISO 14001 COMPLIANT"
The international standard for excellence in Environmental Management Systems. Please recycle or dispose of automotive products in a manner that is friendly to our environment and in accordance with all local, state and federal laws and regulations.

OWNER NOTIFICATION

SOA will prepare and mail an Owner Notification Letter to owners of affected vehicles on or around June 15, 2009.

A copy of the Owner Notification Letter is included at the end of this bulletin.

CATALYTIC CONVERTER WARRANTY EXTENSION

For owners of affected vehicles, SOA is extending warranty coverage for catalytic converters under the Subaru Federal Specification Emissions Extended Defect Limited Warranty to a period of 10 years or 100,000 miles, whichever occurs first. Warranty coverage begins on the date the vehicle was delivered to the first retail purchaser. If the vehicle was used as a demonstrator or company vehicle before being sold at retail, warranty coverage begins on the date the vehicle was first placed in such service.

Note: In the event an affected vehicle requires catalytic converter replacement, as determined by the test procedure described in this Bulletin, the repair will be covered for those vehicles beyond the extended catalytic converter warranty coverage period of 10 years or 100,000 miles provided this Service Program has not been previously performed. This coverage only applies if the vehicle arrives at the dealer for the first time to have the WVI-19 procedure performed with over 100,000 miles and the Check Engine light illuminated with DTC P0420 in the ECM memory. The catalytic converter efficiency test must also indicate replacement is necessary. For all other vehicles, the Catalytic Converter Warranty Extension applies.

DEALER PROGRAM RESPONSIBILITY

Dealers are to promptly service all vehicles subject to this service program at no charge to the vehicle owner regardless of mileage, age of the vehicle, or ownership.

For affected vehicles sold after the date on the dealer's computer list, dealers are to contact those owners and provide them with a copy of the owner notification letter. They should also arrange to make the required correction according to the instructions in the service procedure section of this bulletin.

Dealers are also to promptly perform the applicable service procedures defined in this bulletin to correct all affected vehicles in their inventory (new, used, demo). Additionally, whenever a vehicle subject to this service program is taken into dealer new or used inventory, or is in the dealership for service, necessary steps should be taken to ensure the service program correction has been made before selling or releasing the vehicle.

SPECIAL TOOLS

Vehicle ECM reprogramming will require the following:

Subaru Diagnostic System (SDS)

- SDS Toughbook
- Subaru Select Monitor III (SSMIII Application Software)
- Subaru Diagnostic Interface Box (SDI)
- USB Data Link Cable and Reprogramming Cable.

Note: If you require assistance with using the Subaru Diagnostic System (SDS), use the "Help" function icon, which will allow you access the tutorial information.

Continued...

SERVICE PROCEDURE

This service procedure will involve completing the following two (2) steps:

1) Check ECM memory for diagnostic trouble codes.
2) Reprogram ECM with updated Pack file.

1) Check ECM memory for diagnostic trouble codes.

Using the appropriate Subaru Diagnostics System (SDS) components, connect to the vehicle's Diagnostic Link Connector (DLC) located in the vehicle's lower left dash panel.

Select the Select Monitor Icon from the SDS Graphical User Interface (GUI).

The Main Menu will appear:

1) Select **Each System Check** .
2) Select **Engine Control System**.
3) Select **Diagnostic Code(s) Display**.
4) Select **Memorized Diagnostic Code(s)**.
5) Search results will appear. Proceed as follows:

If no codes are found, proceed to the "ECM Reprogramming Instructions" section of this bulletin, beginning on this page, below.

If trouble codes are found, refer to the following table for the correct repair procedure. Make any necessary repairs and clear all codes prior to reprogramming the ECM.

DIAGNOSTIC TROUBLE CODE	REPAIR PROCEDURE
P0420	Proceed to Catalytic Converter Efficiency Test Procedure on page 4. Reprogram the ECM.
Any other code, or combination of codes, not listed above.	Refer to applicable service manual for additional diagnostic procedures. After completing repairs, clear codes and reprogram the ECM.

2) ECM Reprogramming Instructions

Confirm your SSMIII contains the April 2009 software update.

Upgrade Version Numbers

- Software: 1.18.36.11 or higher
- Interface Box: 1.6.4 or higher
- Interface Box CF Card: 1.2.45 or higher

Use the following Pack file to reprogram the ECM:

VEHICLE	TRANSMISSION	NEW ECM / PACK FILE PART NUMBER
2005MY Legacy & Outback 2.5L NA CA Spec. PZEV	MT	22611AH92G.pak
2005MY Outback 2.5L NA CA Spec. PZEV	AT	22611AH94F.pak
2005MY Legacy 2.5L NA CA Spec. PZEV	AT	22611AJ49F.pak

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CATALYTIC CONVERTER EFFICIENCY TEST PROCEDURE

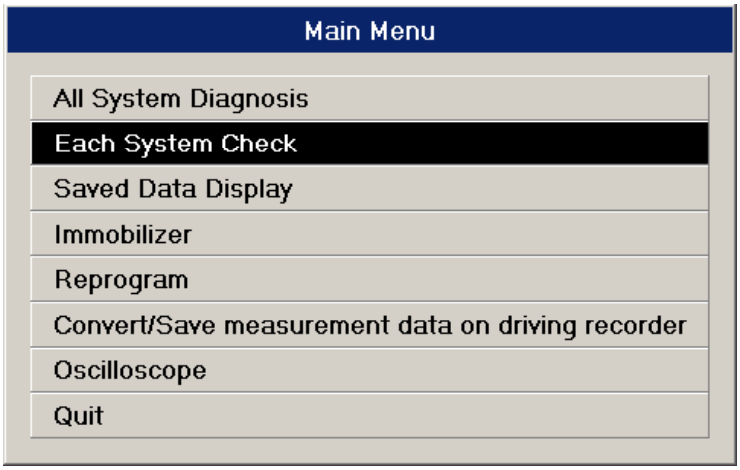
Note: The following procedure is only necessary when troubleshooting for DTC P0420.

This procedure only applies to vehicles affected by this Service Program and should not be used for any other models.

Check for right and/or left front catalyst deterioration using the SSMIII as follows:

- Drive the vehicle for more than 3 minutes at 45 mph or less to warm up the catalytic converters.
- Increase the vehicle speed to 50 through 60 mph and drive at least 5 minutes maintaining a steady throttle. (It is not necessary, but we recommend using the cruise control to maintain a steady throttle.)
- **Prior to turning the ignition off,** follow the procedure below to access the "catalyst deterioration index" readings.

1. From main menu of SSMIII, select the Each System Check



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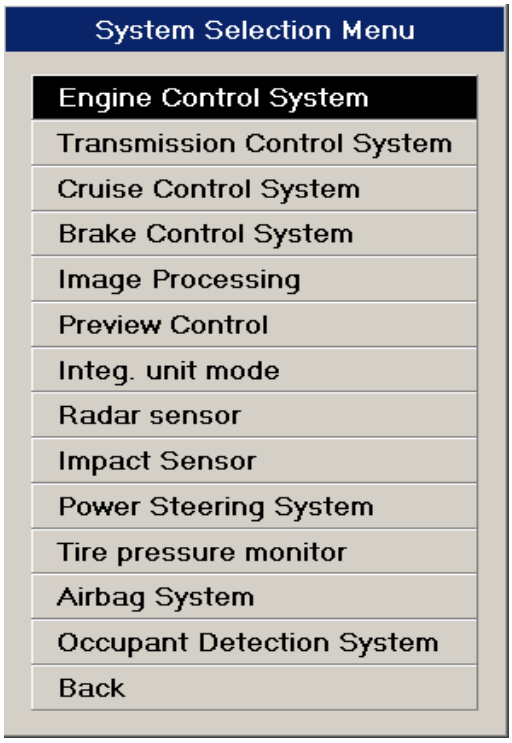
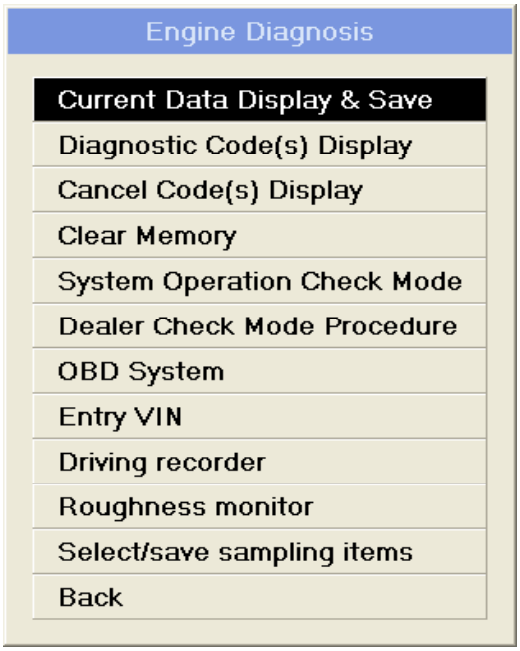
2. Select the Engine Control System



3. The following menu window will be displayed



4. At this screen, press the “Alt” + “Ctrl” + “C” Keys at the same time on the SDS Toughbook.

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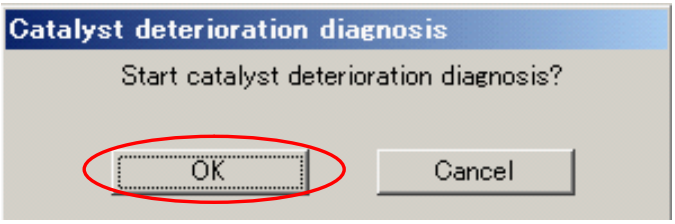
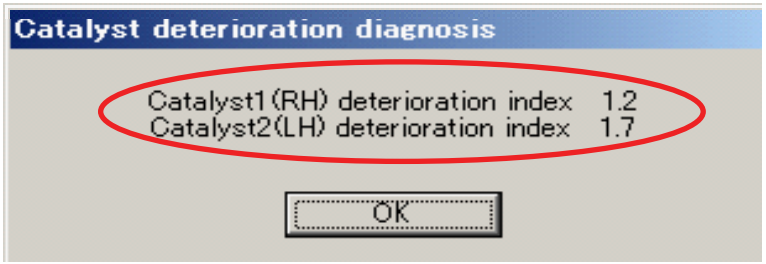
5. The following window should be displayed:



6. Record the following information on the R.O.: Catalyst RH= ?.? and LH= ?.?, indexes, approximate vehicle speed used during test drive, and date the data was recorded (RO date). This information may be required at the time of claim submission.

Note: If the catalyst readings (RH or LH) are zero, something during the 50mph driving cycle occurred to stop the catalyst test. This could be from not maintaining a speed over 50mph, not keeping the throttle steady, etc. Repeat the driving test cycle.



Record these numbers.
Then, Press OK.

Once the deterioration index for catalyst 1 (RH) and catalyst 2 (LH) have been determined, proceed as follows:

Plot the intersection of the RH and LH deterioration indexes in the appropriate position of the following Catalyst Deterioration Chart. Determine the correct repair procedure identified in the corresponding field found on the chart and proceed accordingly. In all cases, the ECM should be reprogrammed with the updated Pack file.

Note: If the index coordinates intersect directly on the line between Field's proceed as follows:

"A" and "B", Reprogram ECM only.

"A" and "C", Reprogram ECM only.

"B" and "C", replace right catalytic converter only.

"B" and "D", replace right catalytic converter only.

"C" and "D", replace left catalytic converter only.

NOTE: Catalytic converter(s) should ONLY be replaced when indicated during the Catalytic Converter Efficiency Test Procedure. They should not be replaced for any other reason.

NOTE 2: ECM reprogramming should be performed after finishing all the procedures below, only when troubleshooting for P0420 was necessary:

1) Diagnosis of trouble codes.

2) Testing of catalytic converter efficiency.

3) Replacement of applicable Pipe Assy and clearing trouble codes.

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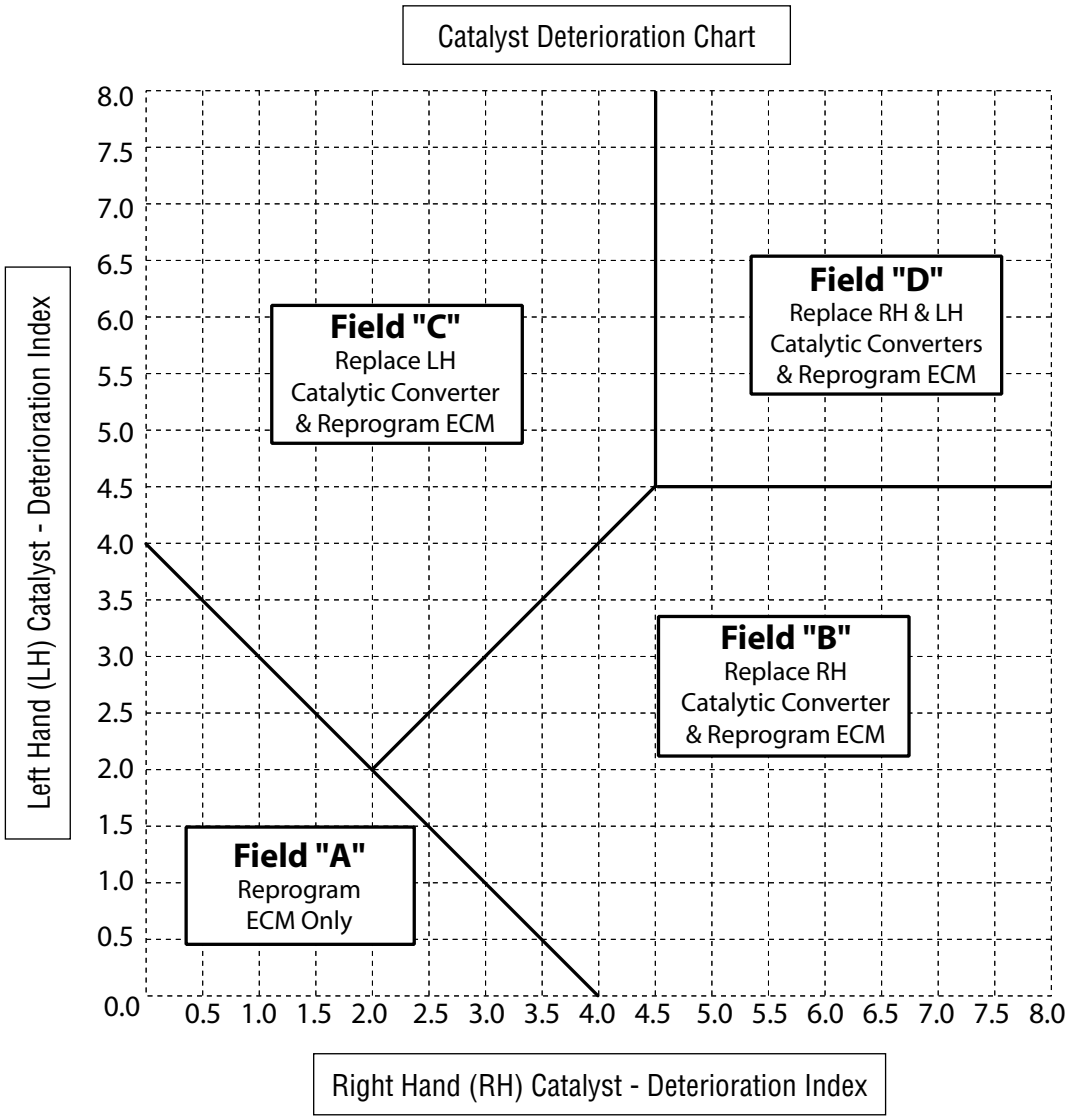

If catalytic converter replacement is necessary, refer to the following parts list:

PART DESCRIPTION	PART NUMBER
Pipe Assy. RH AT	44101AG17A
Pipe Assy. LH AT	44101AG19A
Pipe Assy. RH MT	44101AG18A
Pipe Assy. LH MT	44101AG20A
WVH18 WVI19 GSKT Kit RH	10105AB300
WVH18 WVI19 GSKT Kit LH	10105AB310

STATE EMISSION TESTING ADVISORY

After ECM reprogramming, the OBD system's readiness code monitors will set to "incomplete". Normally, the vehicle needs to be driven under a variety of conditions before the readiness code monitors will indicate "complete". (See State I/M Program Advisory Bulletin number 11-72-04, dated 8/4/04 for details.)

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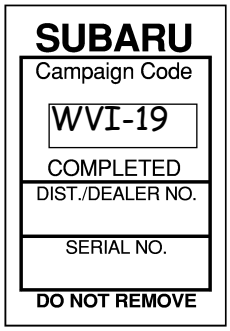
SERVICE PROGRAM IDENTIFICATION LABEL

Type or print the necessary information on a Service Program identification label. The completed label should be attached to the vehicle's upper radiator support.

A quantity of labels has been sent to each dealer along with their affected VIN list. Additional labels are available through the Customer Dealer Services Department (CDS) at 1-866- 782-2782.



CLAIM REIMBURSEMENT AND ENTRY PROCEDURES

Credit to perform this Service Program will be based on the submission of properly completed repair order information. Dealers may submit claims through Vehicle Claim Entry on Subarunet.

ECM Reprogramming Only: Use the applicable claim submission information for Reprogramming the ECM.

• For ECM Reprogramming only:

CLAIM TYPE	CAMPAIGN CODE	LABOR CODE / TIME	LABOR DESCRIPTION
RC	WVI-19	*A145-580 / 0.6	Reprogram ECM.

ECM Reprogramming and Catalytic Converter Replacement:

• For vehicles **within** the 10 year / 100,000 mile Catalytic Converter Extended Warranty period, the Catalyst 1 (RH) and 2 (LH) deterioration index readings are REQUIRED in the comments field at the time of the warranty (WC) claim submission.

CLAIM TYPE	CAMPAIGN CODE	LABOR CODE / TIME	LABOR DESCRIPTION
RC	WVI-19	*A145-680 / 1.0	ECM reprogramming and Catalytic Converter efficiency testing for DTC P0420.
WC		Use Subaru Warranty Wizard for claim coding information	

• For vehicles **beyond** the 10 year / 100,000 mile catalytic converter extended warranty period, the Catalyst 1 (RH) and 2 (LH) deterioration index readings are REQUIRED in the comments field at the time of the recall (RC) claim submission.

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Note: Coverage only applies for vehicles beyond the 10 year / 100,000 mile catalytic converter extended warranty period when <u>all</u> of the following conditions exist: (See the Catalytic Converter Warranty Extension section on page 2 of this Bulletin for additional details.)

1) The Vehicle has not previously had the WVI-19 Service Program performed.
2) The Vehicle is beyond the 10 year / 100,000 mile Catalytic Converter Extended Warranty coverage period.
3) The Check Engine light is illuminated with DTC P0420 in the ECM memory.
4) The catalytic converter efficiency test indicates replacement is necessary.

CLAIM TYPE	CAMPAIGN CODE	LABOR CODE / TIME	LABOR DESCRIPTION
RC	WVI-19	B 145-680 / 1.0	Catalytic converter efficiency testing and ECM reprogramming.
		C 145-682 / 0.6	Replace left front catalytic converter, add.
		C 145-681 / 0.6	Replace right front catalytic converter, add.
		C 145-684 / 0.8	Replace both left & right front catalytic converters, add.

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OWNER NOTIFICATION LETTER

Subaru of America, Inc.
Subaru Plaza
P.O. Box 6000
Cherry Hill, NJ 08034-6000
www.subaru.com

Service Program WVI-19
Engine Control Module Reprogramming
Vehicles Registered in States other than
CA, MA, ME, NY or VT.

June 2009

Dear Subaru Owner:

We would like to thank you for selecting a 2005 Subaru Legacy or Outback with a 2.5 Liter engine equipped with a California Partial Zero Emission Vehicle (PZEV) emission system. At Subaru, we take pride in our products and are committed to your continued satisfaction.

During a quality review, we discovered that under certain unique driving patterns, such as repeated acceleration and deceleration and/or continuous uphill driving at higher speeds (about 75 mph), your vehicle's catalytic converters may develop high internal temperatures that exceed design parameters. If left uncorrected, this condition may eventually degrade the efficiency of the catalytic converters. (The "Check Engine" light will illuminate to alert you if the catalytic converter efficiency has degraded beyond an acceptable level and if your vehicle may be releasing air pollutants that exceed Federal emission standards.) To prevent this condition, Subaru has developed a modification to the Engine Control Module software logic that will improve management of temperatures within the catalytic converters. This software change will not adversely affect the performance of your vehicle.

WHAT WE ARE ASKING YOU TO DO PROMPTLY
We suggest that you schedule an appointment with your Subaru Dealer as soon as possible to have your vehicle's Engine Control Module software reprogrammed. The approximate time to perform this update is 40 minutes. However, it may be necessary for you to leave your car for a longer period on the day of your scheduled appointment to allow your dealer flexibility in scheduling other appointments. Your Subaru dealer will perform this repair at no cost to you.

Please present this letter to your Subaru Dealer on the day of your service appointment.

WARRANTY EXTENSION
If you have this Service Program repair performed promptly, Subaru will extend the Federal Extended Emissions Defect Warranty coverage on your vehicle's front catalytic converters to a period of 10 years or 100,000 miles, whichever occurs first. Warranty coverage begins on the date the vehicle was delivered to the first retail purchaser. If the vehicle was used as a demonstrator or company vehicle before being sold at retail, warranty coverage begins on the date the vehicle was first placed in such service.

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CHANGED YOUR ADDRESS OR SOLD YOUR SUBARU?
If you have changed your address, or if you have sold your Subaru, please complete the enclosed prepaid postcard and mail it to us.

IF YOU NEED FURTHER ASSISTANCE
To locate your nearest Subaru Dealer, you can access our web site at www.Subaru.com and go to the dealer locator function. Or, you may call us at 1-800SUBARU3 (1-800-782-2783) during normal business hours. Please call or write (using the address at the top of this letter) us immediately if the dealer fails or is unable to complete this procedure free of charge.

Your continued satisfaction with Subaru is important to us. This update is intended to assure your vehicle's optimal performance. We appreciate your understanding in this matter and regret any inconvenience this may cause you.

Sincerely,

Subaru of America, Inc.

Notice to Lessors
The lessor of a vehicle who receives this letter is requested to provide a copy of it to the vehicle lessee(s) within 10 business days from receipt. The lessor should also keep a record of the lessee(s) to whom this letter is sent, the date sent, and the applicable vehicle identification number (VIN). (For the purposes of this section, a lessor means a person or entity that in the last twelve months prior to the date of this notification has been the owner, as referenced on the vehicle's title, of any five or more leased vehicles. A leased vehicle is a vehicle leased to another person for a term of at least four months.)
A subsidiary of Fuji Heavy Industries Ltd.